Space Weather Forecast

Issued on Wednesday, 01 June 2022 at 01:20 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

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Space Weather Forecast Headline: Slight chance of Moderate solar activity.

Analysis of Space Weather Activity over past 24 hours
Solar Activity: Solar activity has been Very Low, with no significant activity. There are five regions on the visible disc, but all of these are simple and currently inactive. No Earth directed CMEs (coronal mass ejections) have been observed in coronagraph imagery.

Solar Wind / Geomagnetic Activity: The solar wind has been elevated, but with a declining trend due to a waning fast solar wind. Total magnetic field carried by the solar wind has been weak, with the important north-south component also varying weakly. Geomagnetic activity was Quiet to Unsettled.

Energetic Particles / Solar Radiation: No solar radiation storms were observed.

Four-Day Space Weather Forecast Summary
Solar Activity: Solar activity is expected to be Low or Very Low, with a slight, but decreasing chance of Moderate activity from a sunspot close to the western limb.

Solar Wind / Geomagnetic Activity: There is a low risk that a CME which left the Sun on 28 May could glance the Earth on day 1 (01 June). A fast solar wind is expected to have largely eased by the end of day 1. A further elevated fast wind is then forecast to affect the Earth from day 3 (03 June). Geomagnetic activity is expected to be mainly Quiet through days 1 and 2, but with a slight risk of G1/Minor storms from any CME glance on day 1. A further risk of Active or G1/Minor Storms is possible on day 3 (03 June) due to the forecast connection to the next high speed stream.

Energetic Particles / Solar Radiation: Solar radiation storms are not expected.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

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Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	5	1	5	1
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	10	10	5	5
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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